

CLAIMS

1. A power adapter comprising:
an input configured to receive input power;
a switch coupled to the input and configured to selectively couple the input to one of a
5 low-voltage output and a high-voltage output, the switch being in one of a low-voltage
position and a high-voltage position, respectively; and
a selector circuit coupled to the input and to the switch and configured to provide a
control signal to the switch such that the switch will be in the low-voltage position if the
input receives input power having a DC voltage lower than a threshold voltage and will be in
10 the high-voltage position if the input power has an AC voltage higher than the threshold
voltage.
2. The power adapter of claim 1 wherein the threshold is about, but above, 18
volts.
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3. The power adapter of claim 1 wherein the selector circuit is configured to
cause the switch to be in the low-voltage position if the input power has a voltage of between
about 11 VDC and about 16 VDC.
- 20 4. The power adapter of claim 1 wherein the selector circuit is configured to
cause the switch to be in the high-voltage position if the input power has a voltage of at least
about 90 VAC rms.
5. The power adapter of claim 1 wherein the switch is configured to be in the
25 high-voltage position as a default, and the selector circuit is configured to cause the switch to
change from the high-voltage position to the low-voltage position if the voltage of the input
power is lower than the threshold.
6. The power adapter of claim 1 wherein the selector circuit is configured to
30 inhibit power from the selector circuit from reaching the switch if the voltage of the input
power is below the threshold and to couple power from the selector circuit to the switch if the
voltage of the input power is above the threshold.

7. A power supply system for receiving and processing power of different voltages, the system comprising:

an input apparatus configured to be coupled to a plurality of different socket configurations each associated with one of relatively-high AC voltage and relatively-low DC voltage;

an output device configured to couple to at least one electronic device to provide output power to the electronic device, the output power having an associated voltage appropriate for the electronic device; and

a power adapter coupled to the input apparatus and the output device and configured to automatically provide input power received through the input apparatus having the relatively-low DC voltage to low-DC-voltage converter circuitry and having the relatively-high AC voltage to high-AC-voltage converter circuitry to produce the output power for the electronic device.

8. The system of claim 7 wherein the power adapter is configured to provide the input power to one of the low-DC-voltage circuitry and the high-AC-voltage circuitry based only upon at least one electrical characteristic of the input power.

9. The system of claim 8 wherein the at least one electrical characteristic is the voltage of the input power.

10. The system of claim 7 wherein the power adapter is configured to provide the input power to one of the low-DC-voltage circuitry and the high-AC-voltage circuitry independently of user input to the system.

11. The system of claim 7 wherein the input apparatus includes a plurality of connectors configured to fit into at least two of a United States wall socket, a wall socket of a country other than the United States, an automobile cigarette lighter socket, and an airline power socket.

12. The system of claim 11 wherein the plurality of connectors are configured to be removably coupled to the power adapter.

13. The system of claim 12 wherein the input apparatus includes a power cord fixedly coupled to the power adapter and the plurality of connectors are configured to be removably coupled to the power cord.

5 14. A portable power supply system for providing power from different sources having different voltages to portable electronic devices, the system comprising:

a plurality of input connectors configured to fit into receptacles associated with respective AC and DC voltages;

10 a single input cord, wherein the input cord and the input connectors are configured to be removably coupled together;

a plurality of output connectors configured to fit into power receptacles of portable electronic devices; and

15 a power adapter coupled to the single input cord and configured to be coupled to the output connectors and including coupling means for automatically coupling high-voltage AC signals received by the single input cord to high-voltage AC-to-DC converter circuitry and automatically coupling low-voltage DC signals received by the single input cord to low-voltage DC-to-DC converter circuitry.

20 15. The system of claim 14 wherein the input connectors, input cord, output connectors, and power adapter are configured to be carried by a single person using one arm

16. The system of claim 14 further comprising a backpack housing configured to hold the input connectors, input cord, output connectors, and power adapter.

25 17. The system of claim 14 wherein the input connectors are configured to fit into at least two of a United States wall socket, a wall socket of a country other than the United States, an automobile cigarette lighter socket, and an airline power socket.

30 18. The system of claim 17 wherein the coupling means is configured to couple 110 VAC and 220 VAC signals to the high-voltage AC-to-DC converter circuitry and to couple signals with DC voltages between about 11 VDC and about 16 VDC to the low-voltage DC-to-DC converter circuitry.

19. The system of claim 18 wherein the coupling means configured to couple the signals received by the single input cord to one of the low-voltage DC-to-DC converter circuitry and the high-voltage AC-to-DC converter circuitry independently of user input to the system.

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20. A method of providing an appropriate level of DC power, the method comprising:

receiving input power;

10 automatically coupling the received input power to a high-voltage apparatus if the input power has a voltage above a threshold;

automatically coupling the received input power to a low-voltage apparatus if the input power has a voltage below the threshold;

processing the input power in an appropriate one of the high-voltage apparatus and the low-voltage apparatus to produce the appropriate level of DC power; and

15 outputting the DC power.

21. The method of claim 20 wherein automatically coupling the received input power to the low-voltage apparatus comprises actuating a switch, coupled to receive the input power, to a low-voltage position.

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22. The method of claim 21 wherein automatically coupling the received input power to the low-voltage apparatus comprises actuating the switch from a default, high-voltage position to the low-voltage position, wherein the switch couples the input power to a high-voltage conversion circuit in the high-voltage position and couples the input power to a low-voltage conversion circuit in the low-voltage position.

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23. The method of claim 22 wherein automatically coupling the received input power to the high-voltage apparatus comprises inhibiting the switch from the default, high-voltage position.

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24. The method of claim 20 wherein the threshold is about 18 volts.

25. The method of claim 20 wherein the automatically coupling the received input power to the high-voltage apparatus and the automatically coupling the received input power to the low-voltage apparatus occurs independently of user input.